



Bexar Wire

San Antonio Radio Club
W5SC



2020, No. 3

March 2020

Remote Station Using Gator Boxes



Harold Fleischer, AE5AS, had a problem. He does not have a normal ham shack, if there is such a thing. Like many hams he lives in an area with restrictions and his small yard limits antenna size. When he operates he has to take his gear out to the patio, set up his Buddipole portable antenna and operate out in nature as it were. Rather than carry the gear out one item at a time, Harold needed a way to consolidate the equipment into one or two mobile cases he could carry out and set up quickly. Harold wanted a station that could be set up in 6 minutes or less. A portable station like that could easily be taken to the field for special events such as Field Day, or an emergency situation.

Harold carefully listed the criteria he had for such a station. A case had to have capacity for his gear. It had to be easy to set up and take down. It should provide a convenient operating layout, have a light for night operation and battery backup. It had to be light enough for him to carry without strain.

Our next club meeting will be at 7:00 p.m. (1900) on Thursday, February 13, 2020, at Blanco BBQ, 13259 Blanco Road, San Antonio, TX 78216. The program by Harold Fleischer AE5AS will be on Using Gator Box Pro as a Portable Radio Shack

Harold settled on Gator Boxes, specifically the Gator Box Pro. Gator boxes are used by musical groups to store and transport their electronic equipment, amplifiers, mixers, etc. Harold says the “roadies” or the band’s crew love them. Gator Boxes come in various capacities and formats. He chose a model that had an interior like a standard equipment rack and was 19 inches deep. The capacity for each box is listed in RU or rack units. A rack unit is defined as 1.75 inches high. The more rack units, the more weight. Shelves have to be added to support equipment not designed to be rack mounted, like HF radios, and those add weight.



Harold started with an everything-you-could-want list. The first try resulted in an equipment box that would weigh a bit over 62 pounds, with the second, power supply box, at around 53.4 pounds, far too heavy. After that Harold started paring down the equipment to bare essentials and fitting it all into smaller boxes. Eventually he had two boxes of about 35 pounds each. He also added a cart to the kit so it would be easier to move.

(Continued on Page 5)

SAN ANTONIO RADIO CLUB PRESIDENT'S RADIOGRAM

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
3	R		N5YBG		San Antonio, TX		March
TO W5SC Hello fellow Amateur Radio Operators. I hope everyone is doing well and enjoying spring. I am writing to let you all know that the San Antonio Radio Club – Robert A. Rodriguez Scholarship Fundraiser tickets have arrived. Only 400 ticket have been printed. Tickets are \$25.00 and will be available at the March 12th meeting. I would like to ask from our members if anyone has any experience with Ballon Launching, APRS, and GPS tracking. Also need to know if any of our members have any experience with Fox Hunt or Flying Drones. I would like to include the following for presentation for Radio Fiesta 2021. If you know anyone on a STEM program and would like to showcase Robot building or games. The club will have tables available for students to showcase their projects. The SARC wants to set the foundation for college and career preparation for our youth. Good Dx <i>Rosendo Guzman</i> N5YBG							

Bexar Wire

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The due date for articles is the **Monday** before the first **Thursday** of the month.

San Antonio Radio Club

Membership Meeting Minutes
7:00 p. m., February 13, 2020
Blanco BBQ, 13259 Blanco Rd., San Antonio, TX 78216

- President Called meeting to Order At 7:05 pm
- Introductions by President Rosendo Guzman N5YBG
- Presentation by Harold Fleischer: Go box construction using Gator Boxes
- Certificates of appreciation presented
 - Bill Craft KD2HIQ for his presentation on surge protectors
 - Joe Bruno W5AUQ for Volunteer of the Year
 - Harold Fleischer AE5AS for tonight's presentation
- Minutes of the last meeting approved by unanimous consent without change

Officer Reports:

- President – Rosendo Guzman N5YBG
 - Presented information re: Scholarship Fundraiser, prizes, ticket sales
 - Tom O'Brien AB5XZ is Scholarship Committee chair.
 - Tickets for raffle have been ordered by Bill Craft, should have them by Tuesday 18, 2020.
 - The following Radio will be raffle IC-7610 ICOM HF/50MHz 100W SDR \$2,895.95, ICOM ID-5100A DELUXE \$369.95, ICOM ID-4100A \$304.95, ICOM IC-2730A \$261.95
 - Budget for the first scholarship fundraiser is \$4450.00
 - Raffle details: 400 tickets @ \$25.00 a chance 10,000.00 Give out (2) \$1000.00 scholarship
 - Aubrey Mason WA6DMI volunteered to assist Scholarship Committee chairman
 - Informed membership of the approved budget from Executive Board meeting
- Vice President - Lloyd Swartz KF5ZHW – Future Program: Tom O'Brian AB5XZ on Yagi Antennas
- Secretary – Jack Bannin N5JLB: Minutes posted on website.
- Treasurer – Jeff Boyes, ND8B No Report
- Newsletter Editor – Jimmie Neff reported the February 2020 *Bexar Wire* newsletter had been published to the website and membership notified.
- Webmaster – Bill Craft, KD2HIQ
 - Website – Updated membership page & application for 2020
 - Use of Mail Chimp for keeping membership informed
 - Reported Facebook and webpage statistics
- Membership – Bill Craft KD2HIQ reported that as of January 27, 2020, we had 77 Paid members, 13 Free, 10 Family Members, 66 ARRL Members, a total of 100 members.
- Chairman of the Board Report – Harold Fleischer, AE5AS
 - Summarized the highlights of last week's Executive Committee meeting
 - New budget that is in the black
 - Three-fold increase in profits from Radio Fiesta
 - Board approval of the President's proposal to create a scholarship program and the prizes raffle to raise money to fund the scholarship

- Pat Knight AD5BR appointed to make recommendations about the club logo (retain current, adopt the Centennial logo, or modify)
 - Education and Training – David Finell N7LRY not present. No report
 - Emergency Communications – Joe Bruno, W5AUQ No Report
 - Field Day – Joe Bruno, W5AUQ, announced the approval of funds to replace cover for canopy and approval of small form factor computers for use during Field Day
 - Finance and Review – Paul Guido N5IUT not present. No report
 - JOTA – John Douglas, W5NZK. Not present. No report.
 - Silent Key Committee – Joe Burno W5AUQ announced he will have another get-together to catalog the electronic tubes the club has received.
 - Radio Fiesta – Bill Craft KD2HIQ. The committee meet to review the event, discuss lessons learned, successes and challenges. If members have additional suggestions, send an email to info@w5sc.
 - VE Team – Pat Knight AD5BR not present. President read the report instead: We started 2020 with a January VE session at the Radio Fiesta in Schertz. Four candidates earned the Technician license and one earned a General upgrade. Congratulations! Thank you to all the Volunteer Examiners who helped. Our next regular VE session will be February 22 at 10 AM at the Great Northwest Library, 9050 Wellwood.
 - Logo Committee – Pat Knight AD5BR not present. No report.
 - Centennial Commemoration (Temporary) - Tom O'Brien, AB5XZ
 - Reported he had completed QSL card return.
 - Informed membership of the number of remaining Coins/Pins/Patches: 143 Coins, 142 Pins, 130 Patches.
 - Still \$800 short of recouping cost of producing the items. Executive Committee will discuss the future cost of remaining items
 - Recognized and expressed gratitude for commit members, volunteers, and SAM-SAT
 - Scholarship Committee – Tom O'Brien AB5XZ No Report
 - Old Business (Motions carried over from previous meetings) - None
 - New Business
 - Bill Craft proposed the formation of a committee to explore the use of tee shirts for volunteers at events, such as Radio Fiesta and Field Day. Motion passed. Bill Craft will be chair, Paul Guido N5IUT volunteered for the committee
 - Announcements for The Good of Amateur Radio
 - A member announced that Bexar County ARES will now require regular participation to remain on active list. Those who have not participated in the previous 18 months will be moved to inactive status. Opportunities exist for participation at many levels.
- Meeting Adjourned @ 9:00 PM

A simple survey

Some members have suggested we have a soldering workshop at a meeting for a program instead of the traditional presentation. I have created a simple survey to gauge the interest in having a soldering workshop. It is an anonymous survey (**no email information will be collected**). So if you would please take the survey below (Bill Craft KD2HIQ, Webmaster):

[SURVEY](#)



Volunteer Examiners at Work



Our February VE session at the Great Northwest Library resulted in three new Technicians, one new General, and three Extra upgrades. Congratulations! Thank you to all the Volunteer Examiners who helped.

Our next regular VE session will be April 25 at 10 AM at the Great Northwest Library, 9050 Wellwood. The Extra exam questions will change July 1, 2020, so go ahead and study to upgrade before then.

Contact the VE team at hamtest@gmail.com to pre-register for testing or with any questions.

73,

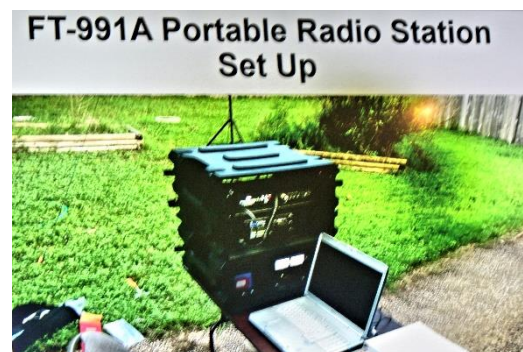
Pat Knight AD5BR

210-273-5927 iPhone

Remote Station Using Gator Boxes (Continued from page 1)

Howard demonstrated the completed station setup testing the assembly time. It took 6 minutes, 21 seconds. He had to take extra time with the power pole setup and so missed his 6-minute window, not bad though. The project involved the previously planned purchase of a new HF rig with support equipment. Howard said it also involved the cooperation of his patient wife. As you can see from the cost figures, the project, at \$2,567.43, was not inexpensive. However, when you consider the cost

of renovation to build a special ham shack with new radio and all the ancillary equipment and wiring, the portable station is not that expensive. Not only does the portable station meet Harold's needs for daily operation, but also it can be easily loaded and taken to where the action is. It was an impressive demonstration of a well-planned, well-executed project!



Equipment Costs		Costs		2 of 2	
Item	Qty	Source	Cost	Notes	
FT-991A Portable Radio Station					
Yaesu FT-991A HF/VHF/UHF Transceiver	1 ea	DigiPartz	1,169.95		
W5WB-M Bracket for FT-991A	1 ea	DigiPartz	35.00		
BT-Tower-Kits USB-A to USB-B Cable	1 ea	DigiPartz	35.00		
Yaesu RS-10 Remote Speaker	1 ea	DigiPartz	149.99		
RS-1000 Subwoofer - HF with Cable VANDU/KG0001	1 ea	RS	149.99		
800Hz Audio Adapter	1 ea	DigiPartz	149.99		
	1 ea		149.99		
Power Pole Gator Box					
MP2-4000W Switching Power Supply, 45A	1 ea	DigiPartz	139.95		
Brady Power 12V 150Ah LFP LiFePO4	1 ea	Amazon	199.99		
W5WB-M 2012	1 ea	Amazon	249.95		
800Hz Adapter	1 ea	DigiPartz	149.99		
Other					
W5WB-M	1 ea	DigiPartz	99.95		
4 Pin Cable to 50A Pin/Type 12 AV/C Transition Cable 3'	1 ea	Q&A Audio Radio	17.75		
RF LMR400 Cable with PL250 Connectors, 10'	1 ea	W5WB (J&R)	15.72		
RF LMR400 Cable with PL250 Connectors, 12'	1 ea	W5WB (J&R)	16.79		
RF LMR400 Cable with PL250 Connectors, 12'	1 ea	W5WB (J&R)	16.79		
Q&A Inc. 20A 10' Braided Cable 3'	1 ea	Amazon	2.95		
Power Pole 12 Cable for the 3' ass.	1 ea	Electro Motion (J&R)	13.99		
400Hz Step Down Transformer with Power Pole 12 Cable, 10' 100W, 40A	1 ea	PowerPoles	11.99		
Q&A 100W 12V 100W to PowerPole 45A 10' 100W, 40A	1 ea	PowerPoles	15.99		
Shielded Cat 6 Ethernet Extension Cable, 3'	1 ea		10.91		
Note 1: 2 in package			2,567.43		



How the National Bureau of Standards helped make “radio”

This was originally published as “NIST’s Role in the Early Decades of Radio (1911-1933)” on the National Institute of Science and Technology’s blog, Taking Measure.

Even if you weren’t able to watch the recent Super Bowl on TV, you could still listen to the play-by-play commentary on the radio. But radio does more than just broadcasting sporting events or playing music. It plays a major role in emergency response, navigation and science.

The word “radio,” however, didn’t become part of our regular vocabulary until 1911, and it happened thanks in part to J. Howard Dellinger, a radio scientist at the National Bureau of Standards (NBS), the agency that became the National Institute of Standards and Technology (NIST). This came about when the second International Radiotelegraph Conference was being planned in London, and a professor sent Dellinger a paper that he was going to present to the conference for review.

At the time, “wireless” was used as the term for radio communication, especially by the British. However, NIST was charged with revising standards in preparation for the conference, and Dellinger suggested that the professor use “radio,” which was already becoming a popular word in the U.S., instead of “wireless.” The professor agreed, and the word “radio” went on to become the universally accepted term.

Dellinger not only played a role in popularizing the word “radio,” but he also played a role in the first radio work done at NIST. A commercial company asked NIST to calibrate a wavemeter, a device developed by one of its engineers that measures electromagnetic waves like those of radio. Dellinger was known as the wireless expert and took on the project of calibrating the first radio instrument at NIST.

A New Type of Radio Receiver

But for radio to become mainstream, it first had to be commercialized, which began with its introduction into households. However, the challenge was building a radio set that used the electrical current, called alternating current (AC), which powered lights, fans and kitchen appliances when plugged into wall sockets. The predecessor to this technology was developed and patented by two researchers, Percival D. Lowell and Francis W. Dunmore, at NBS in 1922. They called their invention the “mousetrap.”

[[Insert how-the-nbs-helped-make-radio-photo.jpg here]]

The “mousetrap” was a receiver for a radio amplifier that could run on AC. This was considered a breakthrough because at that time radios were only able to be powered by direct current (DC) provided by batteries. These batteries were bulky and heavy, had to be charged from time to time and were considered dangerous because of the acid used in them. The researchers’ prototype meant the radio could be used in homes without causing damage and with the same performance quality.

Lowell and Dunmore filed two more patents together for other innovations, and for the “mousetrap” they sold the rights to the Dubilier Condenser Corporation. Little did they know that, because there was no uniform policy on patents issued to government employees, their actions would result in more than a decade of litigation over who legally had the rights to the patent.

While they were tied up in court, the Radio Corporation of America (RCA) developed its own model of the AC radio in 1926. Its model later became the first AC-powered radio sold to consumers.

Flying by Radio

During the early years of flight navigation, NIST was doing research to assist pilots while they were flying and landing. Pilots needed three things to get their bearings when flying “blind,” meaning it’s foggy, too dark or too cloudy to see. They needed to know the longitudinal position, altitude and

The club has helped several people of the last year in dealing with disposal of equipment and it was a learning experience for the SK team. Harold Fleischer, AE5AS developed a "SOP" standard operating procedure document for the SARC Silent Key Committee to deal with the complexities of disposal of equipment.

The goal is to help fellow hams and their families deal with this in their time of need. They do not have to be members of SARC for us to help. We offer our services to the ham community to benefit other hams and their families.

The committee can be reached by emailing SilentKey@w5sc.org

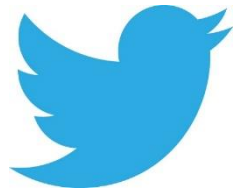


SARC has had a Groups.io. Its name is saradioclub.

The saradioclub Group.io is being used to publicize SARC business meetings. It can be used for other things like promotion of VEC testing and classes. Members of the saradioclub Group.io can and have asked each other technical questions or sought assistance.

The saradioclub Group.io is a closed group. To become a member, go to saradioclub.groups.io. (You may need to have a Groups.io account.) You will then need to select *Apply for membership in this group*. This generates a message. SARC members can expect approval to join the saradioclub Group.io in probably less than 24 hours.

SARC Tweets



Reminder: there are two active Twitter accounts for the San Antonio Radio Club. They are @SARadioClub and @ARadioFiesta.

The @SARadioClub is being used to publicize SARC meetings. It can be used for other things like promotion of VEC testing and classes.

When work again commences the @ARadioFiesta will be used for the January, 2021 Radio Fiesta.

SARC members are encouraged to follow both Twitter accounts.

SARC Facebook



There is a San Antonio Radio Club – SARC (@saradioclub) Facebook Page.

The newsletter editor is making posts about SARC meetings and other activities. Any Officer, Committee Chairperson, or member who believes that they have information that should be posted to this page should contact the newsletter editor using the contact information for the newsletter editor on page 2 of this newsletter.

SARC members are encouraged to follow this Facebook Page

SARC SLACK



There is a San Antonio Radio Club Slack team – w5sc.slack.com.

Slack teams are meant to foster communication between team members. Paul Guido, N5IUT, has established the w5sc.slack.com team for SARC. He has also established some channels. Think of the channels as topical areas.

To join send an email to Paul Guido, N5IUT, at radioteacher@gmail.com. In actuality, any team member already a part of the w5sc.slack.com can invite you, but Paul is known to be on it.

SARC has a website:

w5sc.org

Webmaster: Bill Craft KD2HIQ
Billc851@gmail.com
210-233-8863

Amateur Radio License Classes

Multiple classes planned for 2019.

For more information, contact:
David Finell, N7LRY
Instructor

SARC Meeting Dates for 2019 & Early 2020

January 9, 2020
February 13, 2020
March 12, 2020
April 9, 2020
May 14, 2020
June 11, 2020
July 9, 2020
August 13, 2020
September 10, 2020
October 8, 2020
November 12, 2020
December – No meeting

Meetings are held at Blanco BBQ, 13259
Blanco Rd, San Antonio, TX 78216 at 7:00
p. m. Room is available at 6:00 p. m. for
supper.

Come early and eat with other members
coming early.

License Testing Dates for 2020

February 22, 2020
April 25, 2020
June 27, 2020
August 22, 2020
October 24, 2020

Times and locations along with required
document information can be found on
SARC's website.

SARC does all of its licensing testing as a
part of ARRL Volunteer Examiner Coordi-
nator (VEC) organization so all of the Vol-
unteer Examiners in SARC are duly author-
ized Volunteer Examiners of ARRL's VEC.

JOTA

Boy Scout Jamboree On The Air

This year's date is Oct 16-18, 2020.

More information will be available as the
date draws closer.

Radio Fiesta 2021

January , 2021
To be announced
See website w5sc.org for more information

Emergency Communications

If you are interested in emergency commu-
nications, contact:
JC Smith N5RXS

Field Day 2020

Setup: Friday, June 26, 2020
Operations: Saturday, June 27, 2020
& Sunday, June 28, 2020

*Where SARC proves they are an
eating group with a radio problem.*

More information to follow, but hold these
dates.